

## TEXACO INC. INDUSTRIAL HYGIENE, TOXICOLOGY, AND MATERIAL SAFETY DATA SHEET



NOTE: NO REPRESENTATION IS MADE AS TO THE ACCURACY OF THE INFORMATION HEREIN. SEE PAGE 5 FOR CONDITIONS UNDER WHICH DATA ARE FURNISHED.

| Trade Name and Synor           | ing a state of the contract of                   |
|--------------------------------|--|
| 01537 AIRCRAFT                 | HYDRAULIC OIL 15   |
| Manufacturer's Name Texaco Inc | Emergency Telephone No. (914) 831-3400 ext. 406  |
| Address                        | ()1-7 001 0-100 CAC! 100   |
|                                | eacon, NY 12508  |
| Chemical Name and/or           |  |
| Aircraft Hydra                 |  |
| THIS PRODUCT IS CL             | ASSIFIED AS: NOT HAZARDOUS:  |
| HAZARDOUS                      | BY DEFINITION NO.(S) ON ATTACHED EXPLANATION SHEETS  |
| WARNING STATE                  | MENT:<br>ION: COMBUSTIBLE  |
| CAU1.                          | Ingredients?   |
|                                | ingrevieros ?  |
|                                |  |
| OCCUPATIONAL                   | CONTROL PROCEDURES   |
| Protective Equipment (         | Tyne)  |
| Eyes:                          | Chemical type goggles or face shield optional.   |
|                                |  |
| Skin:                          | Exposed employes should exercise reasonable personal cleanliness; this includes cleansing exposed skin areas several times daily |
|                                | with soap and water, and laundering or dry cleaning soiled work  |
|                                | clothing at least weekly.  |
| Inhalation:                    | None required if exposures are within permissible concentrations; see below.   |
| Ventilation:                   | Normal   |
| Permissible Concentrat         | ions:  |
| Air:                           | 5 mg/cubic meter of air for mineral oil mist averaged over an  |
|                                | 8 hour daily exposure (ACGIH 1983).  |
| EMERGENCY AND                  | FIRST AID PROCEDURES   |
| First Aid                      |  |
| Eyes:                          | As with most foreign materials, should eye contact occur, flush  |
|                                | eyes with plenty of water.   |
| Skin:                          | None considered necessary.   |
|                                | #1110  |
|                                | Will Was   |
|                                | Do NOT induce vomiting. Aspiration may cause chemical pneumonia.   |
| Ingestion:                     | <b>Y</b> • • • • • • • • • • • • • • • • • • •   |
|                                | 7 881 8 1 1 5 1 884  |
|                                |  |
| Inhalation:                    | None considered necessary.   |
| Other Instructions:            | None   |
| Carol misa detroits.           | None.  |
|                                |  |



| PHYSIOLOGICAL           | EFFECTS: Code No. 01537   |
|-------------------------|---|
| Effects of Exposure     |   |
| Acute:<br>Eyes:         | Believed to be minimally irritating.  |
|                         | 공연 회사 등의 활동에 가진 함께 나는 바다 하는 것이다. 이 작은 이 때   |
| <b>C</b> 1              | ikan di kalangan kan mengan bilangan kalangan di kepada di kepada kepada di kepada di mengan di melangan di ke<br>Apada kalangan kan pada di kepada di kepada di kepada di mengan di kepada di kepada di kepada di mengan di kep  |
| Skin:                   | Believed to be minimally irritating. May cause dermatitis on prolonged or repeated contact.   |
|                         |   |
| Respiratory System:     | Believed to be minimally irritating if not in excess of permissible concentrations; see page 1.   |
| Chronic:                | N.D.  |
|                         |   |
| Other:                  |   |
|                         |   |
| Sensitization Propertie |   |
| Skin: Yes N             | lo Unknown X Respiratory: Yes No Unknown X  |
| Median Lethal Dose (L   |   |
| Oral                    | N.D.; believed to be G.T. 5 g/kg (rat); practically non-toxic N.D.  |
| Inhalation<br>Dermal    | N.D.; believed to be G.T. 3 g/kg (rabbit); practically non-toxic  |
| Other                   | N. D.   |
|                         | tion of Irritation (Species)  |
|                         | N.D.; believed to be L.T. 0.5/8.0 (rabbit); no appreciable effect   |
|                         | N.D.; believed to be L.T. 15/110 (rabbit); no appreciable effect N.D.; None expected other than possible minimal irritation   |
|                         |   |
| FIRE PROTECTION         | NEURMATION  |
| Ignition Temp. F.       | N.D. Flash Point F. (Method) 180 F (PM)   |
| Flammable Limits%       | Lower N.D. Upper N.D.   |
| Products Evolved Whe    | con Subjected to Heat or Combustion:  Carbon monoxide, carbon dioxide, aldehydes and ketones, combustion products of nitrogen and sulfur.   |
|                         |   |
|                         |   |
| Recommended Fire Ex     | tinguishing Agents And Special Procedures: According to the National Fire Protection Guide 49, combustible liquid fires may be extinguished by water spray, dry chemical, foam or carbon dioxide. Use water to keep fire-exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for persons at- tempting to stop the leak. |
| Unusual or Explosive I  | orani di salam di sa  |

N.D. - Not Determined N.A. - Not Applicable < Less Than > Greater Than

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| ENVIRONMENTA                                | L PROTECTION   |   | Code<br>No. 91537                                       |
|---|--|---|---|
| Waste Disposal Met                          | Under RCRA, it is the r<br>determine, at the time<br>criteria for hazardous<br>transformations, mixtur | esponsibility of the use of disposal, whether prowaste. This is because e, processes, etc. may re(See Remarks for Waste ( | oduct meets RCRA<br>product uses,<br>render the result- |
| Procedures in Case                          | of Breakage or Leakage:<br>Contain spill if possib<br>and shovel up.                                   | le. Wipe up or absorb or  | n suitable material                                     |
|   |  |   |   |
| Remarks:                                    | Waste Classification: Peteristics and does not a discarded in its purchase                             | meet criteria of a hazar  |   |
| PRECAUTIONAR                                | Y LABEL  |   |   |
|   | CAUTION: COMBUST   | IBLE  |   |
|   | Avoid prolonged or   |   | ng  |
| Store away                                  | ansportation, Handling and Storage: from heat and open flame ed in packaging contained truck.          |   |   |
| DOT Proper Shipping<br>DOT Hazard Class (if | Name: Combustible licapplicable): Combustible lic  |   |   |
| CHEMICAL AND                                | PHYSICAL PROPERTIES  |   |   |
| Bailing Point (PF)                          | N.D.   | Vapor Pressure N.D. (mm   | ıHg)  |
| Specific Gravity                            | .8602 (H <sub>2</sub> O=1)   | Vapor Density N.D. (Air   | = 1)  |
| Appearance and Odor                         | RED  |   |   |
| pH of undiluted prod                        | uct N.A.   | Solubility N.D.   |   |
| Percent Volatile by V                       | /olume_N.D   | Evaporation N.D.  | ( )=1   |
| Viscosity <u>cSt</u> @                      | 40 C = 13.2  | Other   |   |
|   | tions Occur X /iolently With: (If others is checker r Heat Strong                                      |   | on page 4 for futher details)<br>None of These          |



| COMPOSITION Code No.  | 01537  |
|---|--|
| Components Presenting a Significant Hazard  | %  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
| Other Components  | %  |
| Petroleum oil Methacrylate polymer Triaryl phosphate Ditertiarybutylphenol  | 65 - 80<br>20 - 35<br>Less than 1<br>Less than 1 |
|   |  |
|   |  |
|   |  |
|   |  |
| ADDITIONAL COMMENTS   |  |
| TEXACO INTENDS TO COMPLY FULLY WITH PROVISIONS OF THE TOXIC SUBSTANCES CONTROL AC<br>STATE OF MICHIGAN CRITICAL MATERIALS ACT (REVISED 1983)<br>No critical materials present.  | ज<br>ज   |
|   |  |
|   |  |
|   |  |
| 경기 (영화 )는 이 그리고는 말로 등록 하는 시장 등록 발생하는 것을 보고 함께 들어 있다.<br>사람이 사용하는 사람들은 사용하는 사람들이 가장 기를 받는 것을 하는 것을 하는 것을 다 했다.   |  |
| To determine applicability or effect of any law or regulation with respect to this product, user should consult hi legal advisor or the appropriate government agency. Texaco does not undertake to furnish advice on such matter | S.   |
| By R. T. Richards  Date 01-07-83  New Title Mgr. Env. Conservation & Toxicolog Revised, Supersedes  N.D Not Determined N.A Not Applicable   | y  |

N.D. – Not Determined N.A. – Not Applicable < Less Than > Greater Than NOTE: THIS DATA IS FURNISHED GRATUITOUSLY INDEPENDENT OF ANY SALE
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EXPLANATION OF THE INDUSTRIAL HYGIENE TOXICOLOGY, AND MATERIAL SAFETY DATA SHEET

PRODUCT INFORMATION

Trade Name and Synonyms

Refer to the code number and name under which the product is marketed and the common commercial name of the product.

Manufacturer's Name and Address Self explana-

Chemical Name and/or Family or Description

Refer to chemical, generic, or descriptive name of single elements and compounds.

For purposes of this form, a product is defined as hazardous if it possesses one or more of the following charateristics: (1) has a flash-point below 200 degrees Farenheit, closed cup or subject to spontaneous heating; (2) has a threshold limit value below 500 ppm gases and vapor below 5 mg/m<sup>3</sup> for dust, fumes and mist, and below 25 MPPCF for mineral dust; (3) a single dose oral LD50 below 500 mg/kg; (4) causes burns to the skin in the short-term exposure or is systemically toxic by skin contact; (5) has been demonstrated to be a skin or eye irritant or causes respiratory irritation; (6) may cause skin or respiratory sensitization; (7) has teratogenic, mutagenic or other toxic effects; (8) may cause asphyxia or pneumoconiosis; (9) in the course of normal operations may produce dusts, gases, fumes, vapor, thist, or smoke which have one or more of the above characteristics; (10) is hazardous according to OSHA 1910.1200(g)(2)(vii).

OCCUPATIONAL CONTROL PROCEDURES (Consult your Industrial Hygienist or Occupational Health Specialist.)

Protective Equipment

Type of protective equiment that is necessary for the safe handling and use of this product.

Ventilation

Normal means adequate to maintain permissible concentrations.

Ventilation: type, i.e. local exhaust, mechanical, etc.

Permissible Concentrations

Indicates Threshold Limit Value (TLV) and / or Time Weighted Average (TWA) as established by the American Conference of Governmental Industrial Hygienists and/or standards promulgated by the Occupational Safety and Health Administration.

EMERGENCY AND FIRST AID PROCEDURES

Give first aid and emergency procedures in case of eye and/or skin contact, ingestion and inhalation.

PHYSIOLOGICAL EFFECTS

Acute Exposures (Eye, Skin, Respiratory System)

Refers to the most common effects that would be expected to occur from direct contact with the product.

Chronic

Refers to the effects that are most likely to occur from repeated or prolonged exposure.

Sensitizer

Means a substance which will cause on or in normal living tissue, through an allergic or photodynamic process, a hypersensitivity which becomes evident on reapplication of, or exposure to, the same substance.

Median Lethal Dose or Concentration (LD50,LC50)

Refers to that dose or concentration of the material which will produce death in 50 per cent of the animals. For inhalation, exposure time is indicated.

Irritation Index

Refers to an empirical score (Draize Method) for eye and skin irritation which tested by the method described, if numbers are not available, a yes or no answer indicates whether or not the material is an irritant.

FIRE PROTECTION INFORMATION

Ignition Temperature

Refers to the temperature in degrees. Farenheit, at which a liquid will give off enough flammable vapor to ignite, and burn continuously for 5 seconds.

Flash Point (State Method used)

Refers to the temperature in degrees Farenheit, at which a liquid will give off enough flammable vapor to ignite.



Flammable Limits

Refers to the range of gas or vapor concentration (percent by volume in air) which will burn or explode if an ignition source is present. Lower means the the lower flammable limit and upper means the upper flammable limit given in percent.

Products Evolved When Subjected to Heat or Combustion.

The products evolved when this material is subjected to heat or combustion. Includes temperature at which oxidation or other forms of degradation occurs.

Recommended Fire Extinguishing Agents and Special Procedures

Specifies the fire fighting agents that should be used to extinguish fires. If unusual fire hazards are involved or special procedures indicated, this is specified.

Unsusual Fire or Explosive Hazards

Specifies hazards to personnel in case of fire, explosive danger.

## ENVIRONMENTAL PROTECTION

Specifies how this product can be successfully disposed of.

Indicates precautions necessary in the event that leakage or breakage occurs. Included are (a) clean-up procedures, (b) personal protective equipment if necessary, (c) hazards that may be created, i.e. fire, explosion, etc.

## PRECAUTIONARY LABEL

Label that is required or recommended.

Requirements for Transportation, Handling and Storage

Specifies handling and storage procedures. Gives ICC, DOT, or other regulations related to safety and health for transportation.

CHEMICAL AND PHYSICAL PROPERTIES

Boiling Point (or Range)

In degrees Farenheit or Celsius Boiling Point at 760 mmHg.

Vapor Pressure

Refers to the pressure of saturated vapor above the liquid expressed in mm of Hg at 20 degrees Celsius or 68 degrees Farenheit.

Specific Gravity

The ratio of the density of the product to the density of water.

Vapor Density

The ratio of the density of the vapor at saturation concentration (20 degrees Celsius or 68 degrees Farenheit to the density of air at 760 mmHg.)

Appearance and Odor

Refers to the general characterization of the material, e.g. powder, colorless liquid, aromatic odor, etc.

pН

Refers to the degree of acidity or basicity of the material in a specific concentration.

pH1-5 - STRONGLY ACIDIC pH5-7 - WEAKLY ACIDIC pH7-9 - WEAKLY BASIC pH9-14 - STRONGLY BASIC

Solubility

Refers to the solubility of a material by weight in water at room temperature. The term negligible, less than 0.1 %; slight, 0.1 to 1%; moderate, 1 to 10%; appreciable, 10% or greater. Gives solubility in organic solvents where appropriate.

Percent Volatile by volume

Refers to the amount volatized at 20 degrees Celsius or 68 degrees Farenheit when allowed to evaporate.

Evaporation

Gives the rate of evaporation compared to a standard

Viscosity

Measure of flow characteristics in Kinematic viscosity of Saybolt Universal Seconds.

Hazardous Polymerization

Hazardous polymerization is that reaction which takes place at a rate which produces large amounts of energy. Indicates whether it may or may not occur and under what storage conditions.

Does the Material React Violently

Indicates whether the material will react violently, releasing large amounts of energy when exposed under conditions listed.

Composition

Components of the product as manufactured.

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